

STIC Search Report

STIC Database Tracking Number: 200776

TO: Kuo-Liang Peng Location: REM 10A71

Art Unit: 1712

September 7, 2006

Case Serial Number: 10/722406

From: Kathleen Fuller Location: EIC 1700 REMSEN 4B28

Phone: 571/272-2505

Kathleen.Fuller@uspto.gov

Company of

Search Notes	
·	



PENG 10/722406 09/07/2006 Page 1

=> FILE REG

FILE 'REGISTRY' ENTERED AT 17:32:11 ON 07 SEP 2006
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2006 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 6 SEP 2006 HIGHEST RN 905963-91-9 DICTIONARY FILE UPDATES: 6 SEP 2006 HIGHEST RN 905963-91-9

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH June 30, 2006

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

http://www.cas.org/ONLINE/UG/regprops.html

=> FILE HCAPL

FILE 'HCAPLUS' ENTERED AT 17:32:17 ON 07 SEP 2006 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS. COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 7 Sep 2006 VOL 145 ISS 11 FILE LAST UPDATED: 6 Sep 2006 (20060906/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

D QUE L36 => 1 SEA FILE=REGISTRY ABB=ON 496-15-1 L3 L5 1 SEA FILE=REGISTRY ABB=ON 288-32-4 L7 1 SEA FILE=REGISTRY ABB=ON INDAZOLE/CN L9 1 SEA FILE=REGISTRY ABB=ON BENZOXAZOLE/CN L11 1 SEA FILE=REGISTRY ABB=ON 1215-59-4 L12 1 SEA FILE=REGISTRY ABB=ON 271-58-9 L13 1 SEA FILE=REGISTRY ABB=ON "2,1-BENZISOXAZOLE"/CN L14 1 SEA FILE=REGISTRY ABB=ON 274-09-9

```
PENG
      10/722406
                    09/07/2006
                                    Page 2
              1 SEA FILE=REGISTRY ABB=ON 59-49-4
L15
              8 SEA FILE=REGISTRY ABB=ON L3 OR L5 OR L7 OR L9 OR L11 OR L12
L16
                OR (L13 OR L14 OR L15)
L17
              1 SEA FILE=REGISTRY ABB=ON
                                          271-95-4
L18
              9 SEA FILE=REGISTRY ABB=ON L16 OR L17
L21
          20541 SEA FILE=HCAPLUS ABB=ON L18
L22
            236 SEA FILE=HCAPLUS ABB=ON L21 AND ?SILOXANE?
L23
              4 SEA FILE=HCAPLUS ABB=ON L22 AND (PT OR PLATINUM) (5A) (CATALYST?
                 OR CAT/RL)
L24
         673417 SEA FILE=REGISTRY ABB=ON
                                         ((SI(L)C(L)H(L)O))/ELS
L25
          72072 SEA FILE=REGISTRY ABB=ON L24 AND PMS/CI
L26
          68089 SEA FILE=HCAPLUS ABB=ON L25
L27
            110 SEA FILE=HCAPLUS ABB=ON
                                        L26 AND L21
           1655 SEA FILE=HCAPLUS ABB=ON L25 AND (PT OR PLATINUM) (5A) (CATALYST?
L28
                 OR CAT/RL)
L29
              4 SEA FILE=HCAPLUS ABB=ON L28 AND L27
                                        L23 OR L29
L30
              5 SEA FILE=HCAPLUS ABB=ON
L32
            102 SEA FILE=HCAPLUS ABB=ON L21 AND ?SILICONE?
              4 SEA FILE=HCAPLUS ABB=ON L32 AND (PT OR PLATINUM) (5A) (CATALYST?
L33
                 OR CAT/RL)
L34
              5 SEA FILE=HCAPLUS ABB=ON
                                        L30 OR L33
L35
              8 SEA FILE=HCAPLUS ABB=ON
                                         (L32 OR L22 OR L27) AND ?ALKENYL?
L36
             12 SEA FILE=HCAPLUS ABB=ON L34 OR L35
=> D L36 BIB ABS IND/HITSTR 1-12
     ANSWER 1 OF 12
                    HCAPLUS COPYRIGHT 2006 ACS on STN
L36
     2005:824467 HCAPLUS
AN
     143:232452
DN
TI
     High efficiency polyalkylene glycol lubricants for use in worm gears
IN
     Carey, James Thomas; Prendergast, David K.; Buzdygon, Kevin J.
PΑ
SO
     U.S. Pat. Appl. Publ., 6 pp.
     CODEN: USXXCO
DT
     Patent
LA
     English
FAN.CNT 1
     PATENT NO.
                         KIND
                                DATE
                                            APPLICATION NO.
                                                                   DATE
     -----
                                -----
                         ----
                                            -----
                                                                   -----
PΙ
     US 2005181958
                                20050818
                                           US 2005-45755
                         A1
                                                                   20050128
     WO 2005080535
                         A1
                                20050901
                                           WO 2005-US4384
                                                                   20050211
            AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
             CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
             GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
             LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
             NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
             TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
         RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
             AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
             EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT,
             RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
             MR, NE, SN, TD, TG
PRAI US 2004-544704P
                         P
                                20040213
     US 2005-45755
                          Α
                                20050128
OS
     MARPAT 143:232452
AB
     A polyalkylene glycol based lubricant composition that contains specified rust
     inhibitors and antioxidants has lowered operating temperature and is
     particularly suitable for use in worm drive gearboxes. The rust
     inhibitors consist of an N-acylo arcosine and an imidazole while the
```

PENG 10/722406 09/07/2006 Page 3 antioxidant consists of an alkylated di-Ph amine and a hindered phenol. IC ICM C10M141-06 ICS C10M141-10 INCL 508280000; 508283000; 508514000; 508478000 51-8 (Fossil Fuels, Derivatives, and Related Products) stpolyalkylene glycol lubricant gear oil additive antiwear antioxidant antirust; lubricant additive hindered phenol sarcosine deriv diphenylamine triphenyl phosphorothioate; acylated aminoacetic acid polyalkylene lubricant additive tolyltriazine imidazole deriv IT Passivation (agent additives for; high efficiency polyalkylene glycol lubricants for use in worm gears) IT Lubricating oil additives (antioxidants; high efficiency polyalkylene glycol lubricants for use in worm gears) IT Lubricating oil additives (antiwear; high efficiency polyalkylene glycol lubricants for use in worm qears) Lubricating oils

IT

(base oils, synthetic; high efficiency polyalkylene glycol lubricants for use in worm gears)

IT Polyoxyalkylenes, uses

> RL: TEM (Technical or engineered material use); USES (Uses) (base oils; high efficiency polyalkylene glycol lubricants for use in worm gears)

IT Polysiloxanes, uses

> RL: MOA (Modifier or additive use); USES (Uses) (defoamer; high efficiency polyalkylene glycol lubricants for use in worm gears)

IT Lubricating oils

(gear oils, for worm gears; high efficiency polyalkylene glycol lubricants for use in worm gears)

IT Phenols, uses

> RL: MOA (Modifier or additive use); USES (Uses) (hindered, polyoxyalkylene and alkylene diester diols; high efficiency polyalkylene glycol lubricants for use in worm gears)

IT Temperature

(of gear operation, oil formulation effect on; high efficiency polyalkylene glycol lubricants for use in worm gears)

IT Lubricating oil additives

(rust inhibitors; high efficiency polyalkylene glycol lubricants for use in worm gears)

IT 107-97-1D, 1-oxo-C10-C30 alkyl and 1-oxo-C10-C30 alkenyl derivs. 110-25-8, Sarkosyl-O 122-39-4D, Diphenyl amine, C2-C20 dialkyl derivs. 288-32-4D, Imidazole, 2-C10-C30 alkyl, 1-C1-C6 hydroxyalkyl derivs. 597-82-0, O,O,O-Triphenyl phosphorothioate 597-82-0D, 0,0,0-Triphenyl phosphorothioate, trialkylphenyl ester derivs. 21652-27-7, Amine-O 29385-43-1D, Tolyltriazole, 1-(di-branched C2-C20 alkyl)aminomethyl derivs. 88797-00-6 100041-12-1, Irganox L 57 RL: MOA (Modifier or additive use); USES (Uses)

(high efficiency polyalkylene glycol lubricants for use in worm gears) 862582-69-2, Synalox 40D3001 862582-70-5, Synalox 40D700

RL: TEM (Technical or engineered material use); USES (Uses)

(high efficiency polyalkylene glycol lubricants for use in worm gears)

IT 288-32-4D, Imidazole, 2-C10-C30 alkyl, 1-C1-C6 hydroxyalkyl derivs.

RL: MOA (Modifier or additive use); USES (Uses)

(high efficiency polyalkylene glycol lubricants for use in worm gears)

RN288-32-4 HCAPLUS

IT

CN 1H-Imidazole (9CI) (CA INDEX NAME)



SO

L36 ANSWER 2 OF 12 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:521420 HCAPLUS

DN 143:214245

TI Inorganic-organic hybrid protonic polymeric materials for fuel cells based on polycondensed and organically cross-linked sulfonyl- and styrene-functionalized alkoxysilanes

AU Jacob, Stephane; Poinsignon, Christiane; Popall, Michael

CS Fraunhofer Institut fuer Silicatforschung, Wuerzburg, D-97082, Germany

Electrochimica Acta (2005), 50(19), 4022-4028 CODEN: ELCAAV; ISSN: 0013-4686

PB Elsevier B.V.

DT Journal

LA English

AB A new class of proton conducting inorg.-organic polymer (ORMOCER) electrolytes for fuel cells based on polycondensed and organically cross-linked sulfonyl- and styrene-functionalized alkoxysilanes was developed by S. Jacob et. al. (2003). Different synthesis processes are used to take account of the different acidities of the starting alkoxides. System-I is based on the sep. hydrolysis and condensation of the acid and basic alkoxysilanes. Sulfonated alkoxysilanes and a styrene derivative functionalized alkoxysilane are hydrolyzed and co-condensed in parallel to the alkoxysilane containing at least a nitrogen heterocycle, an amine group or a sulfonamide group and a styrene derivative functionalized alkoxysilane. The two polycondensates are then mixed; the resulting resins are shaped into thin films and organically cross-linked via UV and/or thermal curing. Improvements of mech. and electrochem. properties lead to System-II in which the sulfonated functionalized alkoxysilane is 1st hydrolyzed and condensed, then the two other alkoxysilanes are added for co-condensation. In system-III the three alkoxysilanes used for system-I are hydrolyzed and co-condensed without any partial hydrolysis of one of the components. The three systems present a good thermal stability up to 180°. The conductivity of the materials shows an Arrhenius behavior in the temperature

range

25-110° with activation energies of 0.45 up to 0.78 eV depending on sample composition A 1.0 + 10-2 S cm-1-conductivity value was measured for system-II/imidazole membranes at 110° under an inert gas atmospheric The conductivity of anhydrous system-III/imidazole membranes goes from 9.1 + 10-3 S cm-1 at 100° to 2.0 + 10-2 \pm 1.5 + 10-3 S cm-1 at 140°C.

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
 Section cross-reference(s): 35, 38, 76

ST inorg hybrid polymer electrolyte membrane fuel cell **polysiloxane** deriv; linked sulfonyl styrene functionalized alkoxysilane polymer polyelectrolyte

IT Silanes

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (alkoxy, alkenyl, sulfonic-acid functionalized, copolymers with p-vinylphenylmethyldiethoxysilane and N-(3-Triethoxysilylpropyl)-4,5-dihydroimidazole, plain and block graft; inorg.-organic hybrid protonic polymeric materials for fuel cells)

IT Silanes

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (alkoxy, alkenyl, sulfonic-acid functionalized; inorg.-organic hybrid protonic polymeric materials for fuel cells based on polycondensed and organically cross-linked sulfonyl- and styrene-functionalized alkoxysilanes)

IT Silanes

RL: RCT (Reactant); RACT (Reactant or reagent)

(alkoxy, aromatic, and heterocyclic; inorg.-organic hybrid protonic polymeric

materials for fuel cells based on polycondensed and organically cross-linked sulfonyl- and styrene-functionalized alkoxysilanes)

IT Polysiloxanes, preparation

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (aromatic, imidazole-functionalized; inorg.-organic hybrid protonic polymeric

materials for fuel cells based on polycondensed and organically cross-linked sulfonyl- and styrene-functionalized alkoxysilanes)

IT Condensation reaction

Fuel cell electrolytes

Hybrid organic-inorganic materials

Hydrolysis

Polyelectrolytes

(inorg.-organic hybrid protonic polymeric materials for fuel cells based on polycondensed and organically cross-linked sulfonyl- and styrene-functionalized alkoxysilanes)

IT Crosslinking

(of styrene-functionalized **polysiloxane**; inorg.-organic hybrid protonic polymeric materials for fuel cells based on polycondensed and organically cross-linked sulfonyl- and styrene-functionalized alkoxysilanes)

IT Polysiloxanes, preparation

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (polystyrene-, graft, imidazole-Pr functionalized, block, neat and blends with imidazole; inorg.-organic hybrid protonic polymeric materials for fuel cells based on polycondensed and organically cross-linked sulfonyl- and styrene-functionalized alkoxysilanes)

IT Ionic conductivity

(proton; inorg.-organic hybrid protonic polymeric materials for fuel cells based on polycondensed and organically cross-linked sulfonyl- and styrene-functionalized alkoxysilanes)

IT 288-32-4, Imidazole, uses

RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses) (blends with hybrid copolymers; inorg.-organic hybrid protonic polymeric materials for fuel cells based on polycondensed and organically cross-linked sulfonyl- and styrene-functionalized alkoxysilanes)

IT 5990-80-7P, p-Vinylphenylmethyldiethoxysilane 58068-97-6P,
 N-(3-Triethoxysilylpropyl)-4,5-dihydroimidazole 260785-03-3P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(inorg.-organic hybrid protonic polymeric materials for fuel cells based on polycondensed and organically cross-linked sulfonyl- and styrene-functionalized alkoxysilanes)

1T 5990-80-7DP, p-Vinylphenylmethyldiethoxysilane, copolymers with
 N-(3-Triethoxysilylpropyl)-4,5-dihydroimidazole and sulfonated
 alkenylalkoxysilanes, plain and block graft 58068-97-6DP,
 N-(3-Triethoxysilylpropyl)-4,5-dihydroimidazole, copolymers with
 p-vinylphenylmethyldiethoxysilane and sulfonated
 alkenylalkoxysilanes, plain and block graft

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (plain and blends with hybrid copolymers; inorg.-organic hybrid protonic polymeric materials for fuel cells based on polycondensed and organically cross-linked sulfonyl- and styrene-functionalized alkoxysilanes)

IT 288-32-4, Imidazole, uses

RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses) (blends with hybrid copolymers; inorg.-organic hybrid protonic polymeric materials for fuel cells based on polycondensed and organically cross-linked sulfonyl- and styrene-functionalized alkoxysilanes)

RN 288-32-4 HCAPLUS

CN 1H-Imidazole (9CI) (CA INDEX NAME)



IT 260785-03-3P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(inorg.-organic hybrid protonic polymeric materials for fuel cells based on polycondensed and organically cross-linked sulfonyl- and styrene-functionalized alkoxysilanes)

RN 260785-03-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, polymer with trimethoxy[3-(oxiranylmethoxy)propyl]silane, 4-[2-(trimethoxysilyl)ethyl]benzenesulfonamide and 4-[2-(trimethoxysilyl)ethyl]benzenesulfonic acid (9CI) (CA INDEX NAME)

CM 1

CRN 260785-00-0 CMF C11 H19 N O5 S Si

$$\begin{array}{c|c} & \text{OMe} \\ & \text{CH}_2\text{-}\text{CH}_2\text{-}\text{Si-}\text{OMe} \\ & \text{OMe} \\ \\ \text{H}_2\text{N-} \\ & \text{S} \\ \\ & \text{O} \end{array}$$

CM 2

CRN 58556-70-0 CMF C11 H18 O6 S Si

$$\begin{array}{c} \text{OMe} \\ \mid \\ \text{CH}_2 - \text{CH}_2 - \text{Si-OMe} \\ \mid \\ \text{OMe} \\ \end{array}$$

CM 3

CRN 2530-85-0 CMF C10 H20 O5 Si

CM 4

CRN 2530-83-8 CMF C9 H20 O5 Si

$$CH_2-O-(CH_2)_3-Si-OMe$$
OMe

RE.CNT 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L36 ANSWER 3 OF 12 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:468598 HCAPLUS

DN 143:34879

TI Electroluminescent devices having pendant naphthylanthracene-based polymers

IN Zheng, Shiying; Vaeth, Kathleen M.

PA Eastman Kodak Company, USA

SO U.S., 30 pp.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6899963	B1	20050531	US 2004-786812	20040225
PRAI	US 2004-786812		20040225		

GI

AB An electroluminescent device includes an anode, a spaced-apart cathode, and polymer luminescent materials disposed between the anode and cathode, the polymeric luminescent materials includes pendant, 9,10-di-(2-naphthyl)anthracene-based polymers I [R1-4 = H, F, Cl, Br, cyano, nitro, C1-40 alkyl, alkenyl, alkynyl, alkoxy, or amino, or C6-30 aryl; L = a direct bond or a C0- 40 C or non-C linking group].

Ι

IC ICM H05B033-14

INCL 428690000; 428917000; 313504000; 313506000; 427066000

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related
Properties)
Section cross-reference(s): 38

ST electroluminescent device pendant naphthyl anthracene polymer

IT Electroluminescent devices

(electroluminescent devices having pendant naphthylanthracene-based polymers)

IT 852615-85-1P 852615-86-2P

RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)

(electroluminescent devices having pendant naphthylanthracene-based polymers)

IT 84-60-6, 2,6-Dihydroxyanthraquinone 100-39-0, Benzylbromide 288-32-4, Imidazole, reactions 15231-91-1, 2-Bromo-6-hydroxynaphthalene 18162-48-6, tert-Butyldimethylchlorosilane 18908-66-2, 2-Ethylhexyl bromide 852615-84-0 RL: RCT (Reactant); RACT (Reactant or reagent)

(electroluminescent devices having pendant naphthylanthracene-based polymers)

IT 100751-65-3P 332083-42-8P 337369-35-4P 852615-81-7P 852615-82-8P 852615-83-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(electroluminescent devices having pendant naphthylanthracene-based polymers)

IT 852615-86-2P

RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)

(electroluminescent devices having pendant naphthylanthracene-based polymers)

RN 852615-86-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 6-[10-[6-[[(1,1-dimethylethyl)dimethylsilyl]oxy]-2-naphthalenyl]-2,6-bis[(2-ethylhexyl)oxy]-9-anthracenyl]-2-naphthalenyl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 852615-82-8 CMF C60 H72 O5 Si

IT 288-32-4, Imidazole, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)
(electroluminescent devices having pendant naphthylanthracene-based polymers)

RN 288-32-4 HCAPLUS

CN 1H-Imidazole (9CI) (CA INDEX NAME)



RE.CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L36 ANSWER 4 OF 12 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2004:550765 HCAPLUS

DN 141:89546

TI Tertiary amino alkyl amide catalysts for improving physical properties of polyurethane foams

IN Burdeniuc, Juan Jesus

PA Air Products and Chemicals, Inc., USA

SO U.S. Pat. Appl. Publ., 12 pp., Cont.-in-part of U.S. Ser. No. 336,555. CODEN: USXXCO

DT Patent

LA English

FAN.CNT 8

PATENT NO. KIND DATE APPLICATION NO. DATE

PENG	10/722406 09	9/07/2006 Pa	ge 10 .	
PI	US 2004132850	A1 200407		20031202
	US 6835757	B2 200412	28	
	US 6737446	B1 200405	18 US 2003-336555	20030103
	JP 2004211093	A2 200407	29 JP 2003-432218	20031226
	EP 1435365	A2 200407	07 EP 2003-29981	20031230
	EP 1435365	A3 200511	23	
	R: AT, BE, C	CH, DE, DK, ES, F	R, GB, GR, IT, LI, LU, NL,	SE, MC, PT,
	IE, SI, L	LT, LV, FI, RO, M	K, CY, AL, TR, BG, CZ, EE,	HU, SK
	CN 1515601	A 200407	28 CN 2003-10124049	20031231
	KR 2004062884	A 200407	09 KR 2004-39	20040102
PRAI	US 2003-336555	A2 200301	03	
	US 2003-336371	A 200301	03	
	US 2003-338184	A 200301	06	
	US 2003-724887	A 200312	02	
os GI	MARPAT 141:89546			

AB Polyurethane foam was prepared by treating an organic polyisocyanate and a polyol in the presence of water as a blowing agent, a cell stabilizer, a gelling catalyst, a blowing catalyst, and a tertiary amino alkyl amide catalyst composition I (A = CH, N; R1 = H, II; R2, R3 = H, C1-6 linear or branched alkyl; R4, R5 = C1-6 linear or branched alkyl, C2-5 alkylene; R6 = C5-35 linear or branched alkyl, alkenyl, aryl; n = 1-3). Thus, 83.8 parts 3-dimethylaminopropylamine was reacted with 210 parts acetic acid to form 118 parts N-(3-dimethylaminopropyl)acetamide, which is used as catalyst for producing polyurethane foam.

IC ICM C08G018-00

INCL 521155000

CC 35-3 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 38

ST polyurethane foam tertiary aminoalkyl amide polymn catalyst

IT Polysiloxanes, uses

RL: MOA (Modifier or additive use); USES (Uses)

(Dabco DC 5043; tertiary amino alkyl amide catalysts for improving phys. properties of polyurethane foams)

IT Fatty acids, preparation

RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)

(coco, reaction products with dimethylaminopropylamine; tertiary amino alkyl amide catalysts for improving phys. properties of polyurethane foams)

IT Polyurethanes, preparation

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(foams; tertiary amino alkyl amide catalysts for improving phys. properties of polyurethane foams)

IT Amines, uses

RL: CAT (Catalyst use); USES (Uses)

(polyamines, nonpolymeric, permethylated or alkoxylated, blowing catalysts; tertiary amino alkyl amide catalysts for improving phys. properties of polyurethane foams)

IT Fatty acids, preparation RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses) (tall-oil, reaction products with dimethylaminopropylamine; tertiary amino alkyl amide catalysts for improving phys. properties of polyurethane foams) TT Blowing agents Polymerization catalysts (tertiary amino alkyl amide catalysts for improving phys. properties of polyurethane foams) IT Plastic foams RL: TEM (Technical or engineered material use); USES (Uses) (tertiary amino alkyl amide catalysts for improving phys. properties of polyurethane foams) IT 7732-18-5, Water, uses RL: NUU (Other use, unclassified); USES (Uses) (blowing agent; tertiary amino alkyl amide catalysts for improving phys. properties of polyurethane foams) TT 288-32-4D, Imidazole, complexes with boron 3030-47-5, Pentamethyldiethylenetriamine 3033-62-3, Bisdimethyl aminoethyl ether 7440-42-8D, Boron, complexes with imidazole 83016-70-0, Texacat ZF 10 714959-62-3 RL: CAT (Catalyst use); USES (Uses) (blowing catalyst; tertiary amino alkyl amide catalysts for improving phys. properties of polyurethane foams) TΥ 100-76-5D, Quinuclidine, derivs. 123-75-1D, Pyrrolidine, derivs. 280-57-9, 1,4-Diazabicyclo[2.2.2]octane 643-20-9D, Pyrrolizidine, derivs. 497085-84-4, Dabco NE 1060 RL: CAT (Catalyst use); USES (Uses) (gelling catalyst; tertiary amino alkyl amide catalysts for improving phys. properties of polyurethane foams) ΤT 64-18-6, Formic acid, reactions 64-19-7, Acetic acid, reactions 109-55-7, 3-Dimethylaminopropylamine 143-07-7, Lauric acid, reactions 149-57-5, 2-Ethylhexanoic acid RL: RCT (Reactant); RACT (Reactant or reagent) (starting material; preparation of tertiary amino alkyl amide catalysts for improving phys. properties of polyurethane foams) IT 109-55-7DP, 3-Dimethylaminopropylamine, reaction products with fatty acids 3179-80-4P 3197-19-1P 5922-69-0P 6325-18-4P RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses) (tertiary amino alkyl amide catalysts for improving phys. properties of polyurethane foams) IT 319482-44-5P RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (tertiary amino alkyl amide catalysts for improving phys. properties of polyurethane foams) IT 288-32-4D, Imidazole, complexes with boron RL: CAT (Catalyst use); USES (Uses) (blowing catalyst; tertiary amino alkyl amide catalysts for improving

phys. properties of polyurethane foams)

(CA INDEX NAME)

288-32-4 HCAPLUS

1H-Imidazole (9CI)

RN CN

```
THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE.CNT 12
              ALL CITATIONS AVAILABLE IN THE RE FORMAT
     ANSWER 5 OF 12 HCAPLUS COPYRIGHT 2006 ACS on STN
L36
     2004:546515 HCAPLUS
AN
     141:106892
DN
ΤI
     Process for the production of hydrocarbylsilyl carboxylate compounds
IN
     Plehiers, Mark
PA
     Sigma Coatings B.V., Neth.
SO
     PCT Int. Appl., 34 pp.
     CODEN: PIXXD2
DT
     Patent
LΑ
     English
FAN.CNT 1
     PATENT NO.
                         KIND
                                 DATE
                                           APPLICATION NO.
                                                                    DATE
                                             ______
                         ----
                                 _____
                                                                    _____
     WO 2004056837
                                 20040708
PΤ
                                           WO 2003-EP13889
                          Α1
                                                                    20031208
         W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
             CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
             GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
             LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO,
             NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ,
         TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,
             BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE,
             ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK,
             TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
     AU 2003288241
                                          AU 2003-288241
                          A1
                                20040714
                                                                    20031208
     EP 1572701
                          A1
                                20050914
                                            EP 2003-780137
                                                                    20031208
             AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
                                             JP 2004-561241
     JP 2006510690
                                20060330
                          Т2
                                                                    20031208
     US 2005222446
                          A1
                                             US 2005-508219
                                20051006
                                                                    20050404
PRAI EP 2002-258931
                          Α
                                20021220
     WO 2003-EP13889
                          W
                                20031208
     MARPAT 141:106892
AB
     R6CO2(SiR4R5O)nSiR1R2R3 [R4, R5 = OH, alkyl, aryl, alkoxy, aryloxy,
     OSiR1R2R3, O(SiR4R5O)nSiR1R2R3, OCOR6, alkenyl, alkynyl,
     aralkyl, or aralkoxy, optionally substituted by \geq 1 of alkyl,
     alkoxy, aralkyl, aralkoxy, OH, aryl, aryloxy, silyl, OSiR1R2R3,
     O(SiR4R5O)nSiR1R2R3, halo, amino, or aminoalkyl; R1, R2, R3 = H, OH,
     alkyl, aryl, alkoxy, aryloxy, OSiR1R2R3, O(SiR4R50)nSiR1R2R3, OCOR6,
     alkenyl, alkynyl, aralkyl, or aralkoxy, optionally substituted by
     ≥1 of alkyl, alkoxy, aralkyl, aralkoxy, OH, aryl, aryloxy, silyl,
     OSiR1R2R3, O(SiR4R5O)nSiR1R2R3, halo, amino, or aminoalkyl; R6 = H,
     R8pCO2R9, alkyl, aryl, alkenyl, alkynyl, aralkyl, optionally
     substituted by ≥1 of alkyl, alkenyl, alkynyl, aralkyl,
     aryl, halo, amino, or aminoalkyl; p = 0 or 1; when p = 1, R8 = alkyl,
     alkenyl, alkynyl, aryl, aralkyl, aryl, OH, halo, amino, or
     aminoalkyl; R9 = H, alkyl, alkenyl, alkynyl, aryl, aralkyl,
     SiR1R2R3, or O(SiR4R5O)nSiR1R2R3, optionally substituted by ≥1 of
     alkyl, alkenyl, alkynyl, aryl, aryloxy, aralkyl, aralkoxy, halo,
```

OH, alkoxy, amino, or aminoalkyl; n = 0-1000] (I) are manufactured by reaction

of the HOCOR6 (R6 same as in I) with R70(SiR4R50)nSiR1R2R3 (R1-6, n = sameas in I, R7 = H, aralkyl, aryl, alkenyl, alkynyl, alkyl, optionally substituted by ≥1 of R1-5) in the presence of a silaphilic catalyst. A typical I was manufactured by heating Silres SY231 50, HOAc 15, and DMF 5.4 g in 100 mL heptane. ICM C07F007-18 IC ICS C07F007-04 35-8 (Chemistry of Synthetic High Polymers) Section cross-reference(s): 29 hydrocarbylsilyl carboxylate manuf; carboxylic acid reaction ST hydroxysilane; silyl ether reaction carboxylic acid; DMF catalyst methoxy polysiloxane reaction acetic acid IT Silanes RL: RCT (Reactant); RACT (Reactant or reagent) (alkoxy; production of hydrocarbylsilyl carboxylate compds. by reaction of hydroxysilanes, hydroxysiloxanes, siloxane ethers, or silyl ethers with carboxylic acids in presence of silaphilic catalysts) IT Resin acids RL: IMF (Industrial manufacture); PREP (Preparation) (dimers, Dymerex, reaction products, with methoxy polysiloxanes ; production of hydrocarbylsilyl carboxylate compds. by reaction of silicon-containing compds. with carboxylic acids in presence of silaphilic catalysts) IT Rosin RL: IMF (Industrial manufacture); PREP (Preparation) (hydrogenated, reaction products, with methyltriethoxysilane; production of hydrocarbylsilyl carboxylate compds. by reaction of hydroxysilanes, hydroxysiloxanes, siloxane ethers, or silyl ethers with carboxylic acids in presence of silaphilic catalysts) IT **Polysiloxanes**, preparation RL: IMF (Industrial manufacture); PREP (Preparation) (hydroxy, Silres SY300, reaction products, with hydrogenated rosin; production of hydrocarbylsilyl carboxylate compds. by reaction of silicon-containing compds. with carboxylic acids in presence of silaphilic catalysts) IT Polysiloxanes, preparation RL: IMF (Industrial manufacture); PREP (Preparation) (methoxy, Silres SY231, reaction products with acetic acid; production of hydrocarbylsilyl carboxylate compds. by reaction of hydroxysilanes, hydroxysiloxanes, siloxane ethers, or silyl ethers with carboxylic acids in presence of silaphilic catalysts) ΙT Esterification catalysts (production of hydrocarbylsilyl carboxylate compds. by reaction of hydroxysilanes, hydroxysiloxanes, siloxane ethers, or silyl ethers with carboxylic acids in presence of silaphilic catalysts) IT Amides, uses Metal alkoxides Nitriles, uses RL: CAT (Catalyst use); USES (Uses) (production of hydrocarbylsilyl carboxylate compds. by reaction of hydroxysilanes, hydroxysiloxanes, siloxane ethers, or silyl ethers with carboxylic acids in presence of silaphilic catalysts) IT Esters, preparation RL: IMF (Industrial manufacture); PREP (Preparation) (production of hydrocarbylsilyl carboxylate compds. by reaction of hydroxysilanes, hydroxysiloxanes, siloxane ethers, or silyl ethers with carboxylic acids in presence of silaphilic

Nonapropyl-1-acetoxytetrasiloxane

Nonabutyl-1-acetoxytetrasiloxane

Nonaphenyl-1-acetoxytetrasiloxane

Nonaisobutyl-1-acetoxytetrasiloxane

Nonakis (pentyl) -1-acetoxytetrasiloxane

Nonakis (dodecyl) -1-acetoxytetrasiloxane

Nonakis(hexyl)-1-acetoxytetrasiloxane

catalysts) IT Carboxylic acids, reactions RL: RCT (Reactant); RACT (Reactant or reagent) (production of hydrocarbylsilyl carboxylate compds. by reaction of hydroxysilanes, hydroxysiloxanes, siloxane ethers, or silyl ethers with carboxylic acids in presence of silaphilic catalysts) IT Amines, uses RL: CAT (Catalyst use); USES (Uses) (rosin alkyl, N-formyl; production of hydrocarbylsilyl carboxylate compds. by reaction of hydroxysilanes, hydroxysiloxanes, siloxane ethers, or silyl ethers with carboxylic acids in presence of silaphilic catalysts) 60-35-5, Acetamide, uses TT 67-68-5, DMSO, uses 68-12-2, DMF, uses 75-12-7, Formamide, uses 75-12-7D, Formamide, N-rosin derivs. Trimethylamine, uses 80-73-9 100-10-7, p-Dimethylaminobenzaldehyde 108-47-4, 2,4-Dimethylpyridine 110-86-1, Pyridine, uses 124-41-4, Sodium methoxide 288-32-4, Imidazole, uses 429-41-4, Tetrabutylammonium fluoride 591-22-0, 3,5-Dimethylpyridine 616-47-7. N-Methylimidazole 680-31-9, HMPA, uses 694-59-7, Pyridine N-oxide 695-19-2, N-Methyl-4-pyridone 791-28-6, Triphenylphosphine oxide 865-34-9, Lithium methoxide 872-50-4, NMP, uses 1122-58-3, DMAP 1310-65-2, Lithium hydroxide 1739-84-0, 1,2-Dimethylimidazole 2302-39-8, 4,5-Dimethylimidazole 4485-12-5, Lithium stearate 5593-70-4 7226-23-5 7440-31-5D, Tin, organic derivs. 7440-42-8D, Boron, derivs. 7681-49-4, Sodium fluoride, uses 7681-82-5, Sodium iodide, uses 7789-23-3, Potassium fluoride 13400-13-0, Cesium fluoride 1,3,5-Triisopropoxycyclotrialuminoxane RL: CAT (Catalyst use); USES (Uses) (production of hydrocarbylsilyl carboxylate compds. by reaction of hydroxysilanes, hydroxysiloxanes, siloxane ethers, or silyl ethers with carboxylic acids in presence of silaphilic catalysts) IT 64-19-7DP, Acetic acid, reaction products with methoxy polysiloxanes 79-10-7DP, Acrylic acid, esters with hydroxy derivs. of hexasiloxane 79-41-4DP, Methacrylic acid, esters with hydroxy derivs. of hexasiloxane 1929-33-5P, 2031-67-6DP, Methyltriethoxysilane, reaction Triphenyl-1-acetoxysilane 2754-27-0P, Trimethyl-1-acetoxysilane products with hydrogenated rosin 3453-81-4P, Nonamethyl-1-acetoxytetrasiloxane 3560-95-0P, Undecamethyl-1-acetoxypentasiloxane 5290-29-9P, Triethyl-1-acetoxysilane 17315-26-3P, Tripropyl-1-acetoxysilane 17315-27-4P, Triisopropyl-1-acetoxysilane 22192-48-9P 27596-66-3DP, Hexasiloxane, (meth) acryloyloxy derivs. 56522-03-3P, Tribenzyl-1-acetoxysilane 72403-64-6P, 3-Acetoxy-1,1,1,3,5,5,5heptamethyltrisiloxane 74098-43-4P, Tris(trimethylsilyloxy)-1acetoxysilane 93297-60-0P, Tri-tert-butyl-1-acetoxysilane 144139-44-6P, Tridecamethyl-1-acetoxyhexasiloxane 718614-09-6P , Triisobutyl-1-acetoxysilane 718614-10-9P, Tris(pentyl)-1-acetoxysilane 718614-11-0P, Nonaethyl-1-acetoxytetrasiloxane 718614-12-1P, Nona-tert-butyl-1-acetoxytetrasiloxane 718614-13-2P, Nonabenzyl-1-acetoxytetrasiloxane 718614-14-3P, Nonaisopropyl-1-acetoxytetrasiloxane 718614-15-4P,

718614-16-5P,

718614-19-8P,

718614-22-3P,

718614-17-6P,

718614-18-7P,

718614-21-2P,

718614-20-1P,

```
Nonakis (octyl) -1-acetoxytetrasiloxane
                                        718614-23-4P,
Undecaethyl-1-acetoxypentasiloxane 718614-24-5P,
Undeca-tert-butyl-1-acetoxypentasiloxane
                                           718614-25-6P,
Undecabenzyl-1-acetoxypentasiloxane
                                      718614-26-7P,
Undecaisopropyl-1-acetoxypentasiloxane
                                         718614-27-8P,
Undecapropyl-1-acetoxypentasiloxane
                                      718614-28-9P,
Undecaisobutyl-1-acetoxypentasiloxane
                                        718614-29-0P,
1,1,3,3,5,5,7,7,9,9,9-Undecakis (pentyl) -1-acetoxypentasiloxane
718614-30-3P, Undecabutyl-1-acetoxypentasiloxane
                                                   718614-31-4P,
1,1,3,3,5,5,7,7,9,9,9-Undecakis (dodecyl) -1-acetoxypentasiloxane
718614-32-5P, 1,1,3,3,5,5,7,7,9,9,9-Undecakis(hexyl)-1-
acetoxypentasiloxane
                       718614-33-6P, Undecaphenyl-1-
acetoxypentasiloxane
                       718614-34-7P, 1,1,3,3,5,5,7,7,9,9,9-
Undecakis (octyl) -1-acetoxypentasiloxane
                                          718614-35-8P,
Tridecaethyl-1-acetoxyhexasiloxane
                                     718614-36-9P,
Trideca-tert-butyl-1-acetoxyhexasiloxane
                                           718614-37-0P,
Tridecabenzyl-1-acetoxyhexasiloxane
                                      718614-38-1P,
                                         718614-39-2P,
Tridecaisopropyl-1-acetoxyhexasiloxane
Tridecapropyl-1-acetoxyhexasiloxane
                                      718614-40-5P,
Tridecaisobutyl-1-acetoxyhexasiloxane
                                        718614-41-6P,
Tridecapentyl-1-acetoxyhexasiloxane
                                      718614-42-7P,
Tridecabutyl-1-acetoxyhexasiloxane
                                     718614-43-8P,
Tridecadodecyl-1-acetoxyhexasiloxane
                                       718614-44-9P,
Tridecahexyl-1-acetoxyhexasiloxane
                                     718614-45-0P,
Tridecaphenyl-1-acetoxyhexasiloxane
                                     718614-46-1P,
Tridecaoctyl-1-acetoxyhexasiloxane
                                     718614-47-2P,
1-Ethyl-3,3,3-trimethyl-1-trimethylsilyloxy-1-acetoxydisiloxane
RL: IMF (Industrial manufacture); PREP (Preparation)
   (production of hydrocarbylsilyl carboxylate compds. by reaction of
   hydroxysilanes, hydroxysiloxanes, siloxane ethers,
   or silyl ethers with carboxylic acids in presence of silaphilic
   catalysts)
7671-19-4
            15811-64-0, Methoxytributylsilane
RL: RCT (Reactant); RACT (Reactant or reagent)
   (production of hydrocarbylsilyl carboxylate compds. by reaction of
   hydroxysilanes, hydroxysiloxanes, siloxane ethers,
   or silyl ethers with carboxylic acids in presence of silaphilic
   catalysts)
288-32-4, Imidazole, uses
RL: CAT (Catalyst use); USES (Uses)
   (production of hydrocarbylsilyl carboxylate compds. by reaction of
  hydroxysilanes, hydroxysiloxanes, siloxane ethers,
   or silyl ethers with carboxylic acids in presence of silaphilic
   catalysts)
288-32-4 HCAPLUS
1H-Imidazole (9CI)
                    (CA INDEX NAME)
```



IT

IT

RN CN

RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L36 ANSWER 6 OF 12 HCAPLUS COPYRIGHT 2006 ACS on STN AN 2004:545716 HCAPLUS

- Tertiary amino alkyl amide catalysts for improving physical properties of TI polyurethane foams
- Burdeniuc, Juan Jesus IN
- Air Products and Chemicals, Inc., USA PA
- SO Eur. Pat. Appl., 16 pp. CODEN: EPXXDW
- DΤ Patent
- English LA

FAN.	CNT 8				
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ΡI	EP 1435365	A2	20040707	EP 2003-29981	20031230
	EP 1435365	A3	20051123		
	R: AT, BE, CH,	DE, DK	, ES, FR, GB	GR, IT, LI, LU, NL,	SE, MC, PT,
	IE, SI, LT,	LV, FI	, RO, MK, CY	, AL, TR, BG, CZ, EE,	HU, SK
	US 6737446	B1	20040518	US 2003-336555	20030103
	US 2004132847	A1	20040708	US 2003-336371	20030103
	US 6762211	B2	20040713		
	US 6759447	B1	20040706	US 2003-338184	20030106
	US 2004132850	A1	20040708	US 2003-724887	20031202
	US 6835757	B2	20041228		
PRAI	US 2003-336371	A	20030103		
	US 2003-336555	A	20030103		
	US 2003-338184	A	20030106		
	US 2003-724887	A	20031202		
OS GI	MARPAT 141:89534				

$$\begin{array}{c}
R^4 \\
R^5
\end{array}$$

$$\begin{array}{c}
R^2 \\
C \\
\downarrow \\
R^3
\end{array}$$

II

- AB Polyurethane foam was prepared by treating an organic polyisocyanate and a polyol in the presence of water as a blowing agent, a cell stabilizer, a gelling catalyst, a blowing catalyst, and a tertiary amino alkyl amide catalyst composition I (A = CH, N; R1 = H, II; R2, R3 = H, C1-6 linear or branched alkyl; R4, R5 = C1-6 linear or branched alkyl, C2-5 alkylene; R6 = C5-35 linear or branched alkyl, alkenyl, aryl; n = 1-3). Thus, 83.8 parts 3-dimethylaminopropylamine was reacted with 210 parts acetic acid to form 118 parts N-(3-dimethylaminopropyl)acetamide, which is used as catalyst for producing polyurethane foam.
- IC ICM C08G018-18
 - ICS C08G018-40; C08J009-00
- CC 35-3 (Chemistry of Synthetic High Polymers)
- Section cross-reference(s): 38
- polyurethane foam tertiary aminoalkyl amide polymn catalyst ST
- IT Polysiloxanes, uses
 - RL: MOA (Modifier or additive use); USES (Uses)

(Dabco DC 5043; tertiary amino alkyl amide catalysts for improving phys. properties of polyurethane foams)

- IT Fatty acids, preparation
 - RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)

(coco, reaction products with dimethylaminopropylamine; tertiary amino alkyl amide catalysts for improving phys. properties of polyurethane

foams)

IT Polyurethanes, preparation

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(foams; tertiary amino alkyl amide catalysts for improving phys. properties of polyurethane foams)

IT Amines, uses

RL: CAT (Catalyst use); USES (Uses)

(polyamines, nonpolymeric, permethylated or alkoxylated, blowing catalysts; tertiary amino alkyl amide catalysts for improving phys. properties of polyurethane foams)

IT Fatty acids, preparation

RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)

(tall-oil, reaction products with dimethylaminopropylamine; tertiary amino alkyl amide catalysts for improving phys. properties of polyurethane foams)

IT Blowing agents

Polymerization catalysts

(tertiary amino alkyl amide catalysts for improving phys. properties of polyurethane foams)

IT Plastic foams

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(tertiary amino alkyl amide catalysts for improving phys. properties of polyurethane foams)

IT 7732-18-5, Water, uses

RL: NUU (Other use, unclassified); USES (Uses)
(blowing agent; tertiary amino alkyl amide catalysts for improving phys. properties of polyurethane foams)

IT 288-32-4D, Imidazole, complexes with boron 3030-47-5, Pentamethyldiethylenetriamine 3033-62-3, Bisdimethyl aminoethyl ether 7440-42-8D, Boron, complexes with imidazole 83016-70-0, Texacat ZF 10 714959-62-3

RL: CAT (Catalyst use); USES (Uses)

(blowing catalyst; tertiary amino alkyl amide catalysts for improving phys. properties of polyurethane foams)

IT 319482-44-5P

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (foams; tertiary amino alkyl amide catalysts for improving phys. properties of polyurethane foams)

IT 100-76-5, Quinuclidine 123-75-1D, Pyrrolidine, derivs. 280-57-9,
1,4-Diazabicyclo[2.2.2]octane 643-20-9D, Pyrrolizidine, derivs.
497085-84-4, Dabco NE 1060

RL: CAT (Catalyst use); USES (Uses)

(gelling catalyst; tertiary amino alkyl amide catalysts for improving phys. properties of polyurethane foams)

IT 64-18-6, Formic acid, reactions 64-19-7, Acetic acid, reactions 109-55-7, 3-Dimethylaminopropylamine 143-07-7, Lauric acid, reactions 149-57-5, 2-Ethylhexanoic acid

RL: RCT (Reactant); RACT (Reactant or reagent)

(starting material; preparation of tertiary amino alkyl amide catalysts for improving phys. properties of polyurethane foams)

IT 109-55-7DP, 3-Dimethylaminopropylamine, reaction products with fatty acids 3179-80-4P 3197-19-1P 5922-69-0P 6325-18-4P

RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)

(tertiary amino alkyl amide catalysts for improving phys. properties of polyurethane foams)

PENG 10/722406 09/07/2006 Page 18 IT 288-32-4D, Imidazole, complexes with boron RL: CAT (Catalyst use); USES (Uses) (blowing catalyst; tertiary amino alkyl amide catalysts for improving phys. properties of polyurethane foams) RN288-32-4 HCAPLUS CN1H-Imidazole (9CI) (CA INDEX NAME) applicants ANSWER 7 OF 12 HCAPLUS COPYRIGHT 2006 ACS on STN L36 2004:446934 HCAPLUS AN DN 141:8061 Flame retardant silicone compositions ΤI IN Tanaka, Miyuki; Sato, Kazuyasu Shin-Etsu Chemical Co., Ltd., Japan PA SO Eur. Pat. Appl., 9 pp. CODEN: EPXXDW DТ Patent English LA FAN.CNT 1 PATENT NO. KIND DATE APPLICATION NO. DATE -------------------_____ PΙ 20040602 EP 2003-257535 EP 1424364 A1 20031128 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK JP 2004182758 A2 20040702 JP 2002-347807 20021129 US 2004106706 **A**1 20040603 ŲS 2003-722406 20031128 Α PRAI JP 2002-347807 20021129 The silicone compns. comprising (A) an

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK

JP 2004182758 A2 20040702 JP 2002-347807 20021129

US 2004106706 A1 20040603 US 2003-722406 20031128

PRAI JP 2002-347807 A 20021129

AB The silicone compns. comprising (A) an organopolysiloxane having ≥1 lower alkenyl group in a mol., (B) an organohydrogenpolysiloxane having ≥2

SiH groups in a mol., (C) a platinum catalyst, and (D)

≥1 compound selected from among indoline, 1,2,3-triazole, 1,2,4-triazole, imidazole, indazole, benzoxazole, 2-hydroxybenzoxazole, 5-benzyloxyindole, 1,2-benzisoxazole, 2,1-benzisoxazole, and 1,3-benzodioxole are cured effectively into a transparent rubbery or gel product having flame retardance. Thus, dimethylvinylsilyl-terminated dimethylsiloxane 100, trimethylsilyl-terminated dimethylsiloxane complex 0.25, and benzoxazole 0.005 part were mixed and heat-cured at 150° for 30 min to give a sheet with good flame retardancy.

IC ICM C08L083-07

ICS C08L083-05; C08K005-1565; C08K005-3417; C08K005-3445; C08K005-3447; C08K005-3472; C08K005-353

- CC 37-6 (Plastics Manufacture and Processing)
- ST flame retardant silicone compn polysiloxane hydrosilyation benzoxazole

IT Polysiloxanes, preparation

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(crosslinked; flame retardant silicone compns.)

IT Cyclosiloxanes

```
PENG
     10/722406
                    09/07/2006
                                     Page 19
     RL: MSC (Miscellaneous)
        (di-Me; flame retardant silicone compns.)
TT
     Fire-resistant materials
     Fireproofing agents
     Hydrosilylation
        (flame retardant silicone compns.)
     31900-57-9DP, Dimethylsilanediol homopolymer, dimethylvinylsilyl-
IT
     terminated, hydrosilylation with hydrogen-containing polysiloxanes
     156118-35-3DP, Dimethylsilanediol-methylsilanediol copolymer,
     trimethylsilyl or dimethylsilyl-terminated, hydrosilylation with
     vinyl-containing siloxanes
     RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP
     (Properties); TEM (Technical or engineered material use); PREP
     (Preparation); USES (Uses)
        (assumed monomers; flame retardant silicone compns.)
     59942-04-0DP, Vinyldimethylsilyl-terminated
TT
     dimethylsiloxane, hydrosilylation with hydrohen-containing
     polysiloxanes
     RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP
     (Properties); TEM (Technical or engineered material use); PREP
     (Preparation); USES (Uses)
        (flame retardant silicone compns.)
     59-49-4, 2-Hydroxybenzoxazole
                                     95-14-7, 1H-Benzotriazole
IT
     271-44-3, Indazole 271-58-9, 2,1-Benzisoxazole
     271-95-4, 1,2-Benzisoxazole 274-09-9, 1,3-Benzodioxole
     288-32-4, Imidazole, uses 288-88-0, 1H-1,2,4-Triazole
     496-15-1, Indoline 1215-59-4, 5-Benzyloxyindole
     27070-49-1, 1,2,3-Triazole
     RL: MOA (Modifier or additive use); USES (Uses)
        (flame retardant; flame retardant silicone compns.)
IT
     31900-57-9DP, Dimethylsilanediol homopolymer, dimethylvinylsilyl-
     terminated, hydrosilylation with hydrogen-containing polysiloxanes
     156118-35-3DP, Dimethylsilanediol-methylsilanediol copolymer,
     trimethylsilyl or dimethylsilyl-terminated, hydrosilylation with
     vinyl-containing siloxanes
     RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP
     (Properties); TEM (Technical or engineered material use); PREP
     (Preparation); USES (Uses)
        (assumed monomers; flame retardant silicone compns.)
     31900-57-9 HCAPLUS
RN
CN
     Silanediol, dimethyl-, homopolymer (9CI) (CA INDEX NAME)
     CM
          1
     CRN
         1066-42-8
     CMF C2 H8 O2 Si
     OH
H_3C-Si-CH_3
     OH
```

NAME)

156118-35-3 HCAPLUS

RN

CN

Silanediol, dimethyl-, polymer with methylsilanediol (9CI) (CA INDEX

CRN 43641-90-3 CMF C H6 O2 Si

CM 2

CRN 1066-42-8 CMF C2 H8 O2 Si

IT 59942-04-0DP, Vinyldimethylsilyl-terminated dimethylsiloxane, hydrosilylation with hydrohen-containing polysiloxanes

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(flame retardant silicone compns.)

RN 59942-04-0 HCAPLUS

CN Poly[oxy(dimethylsilylene)], α -(ethenyldimethylsilyl)- ω -[(ethenyldimethylsilyl)oxy]- (9CI) (CA INDEX NAME)

CN 2(3H)-Benzoxazolone (9CI) (CA INDEX NAME)

PENG 10/722406 · 09/07/2006 Page 21

RN 271-44-3 HCAPLUS

CN 1H-Indazole (7CI, 8CI, 9CI) (CA INDEX NAME)

RN 271-58-9 HCAPLUS

CN 2,1-Benzisoxazole (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

RN 271-95-4 HCAPLUS

CN 1,2-Benzisoxazole (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

RN 274-09-9 HCAPLUS

CN 1,3-Benzodioxole (9CI) (CA INDEX NAME)

RN 288-32-4 HCAPLUS

CN 1H-Imidazole (9CI) (CA INDEX NAME)

RN 496-15-1 HCAPLUS

CN 1H-Indole, 2,3-dihydro- (9CI) (CA INDEX NAME)



1215-59-4 HCAPLUS RN

CN 1H-Indole, 5-(phenylmethoxy)- (9CI) (CA INDEX NAME)

ANSWER 8 OF 12^ℓ HCAPLUS COPYRIGHT 2006 ACS on STN L36

AN 2002:658762 HCAPLUS

DN 137:186376

ΤI Hydrophilic curable ethoxylated silicones

IN Gosselink, Eugene Paul; Trinh, Toan; Gardner, Robb Richard

PΑ The Procter & Gamble Co., USA

SO U.S. Pat. Appl. Publ., 22 pp.

CODEN: USXXCO

DT Patent

LA English

FAN.	CNT	1																
	PA	TENT :	NO.			KIN		DATE					ION 1			D	ATE	
ΡI	US	2002	1200	 57				 2002	0829							2/	0011	115
		6649		-		B2		2003			· ·	001	,,,,,	, ,			0011.	
							A1 20030109 WO 2001-US47690			690		20011114						
		W:	ΑE,	AG,	АĽ,	AM,	AT,	AT,	AU,	AZ,	BA,	BB,	BG,	BR,	BY,	BZ,	CA,	CH,
																EE,		
						-	-	-	-	-	-	•	•			JР,	•	•
			KP,	KR,	KZ,	LC,	LK,	LR,	LS,	LT,	LU,	LV,	MA,	MD,	MG,	MK,	MN,	MW,
			MX,	MZ,	NO,	NZ,	PH,	PL,	PT,	RO,	RU,	SD,	SE,	SG,	SI,	sĸ,	SK,	SL,
																AZ,		
			KZ,	MD,	RU,	TJ												
		RW:	GH,	GM,	ΚE,	LS,	MW,	MZ,	SD,	SL,	SZ,	TZ,	UG,	ZM,	ZW,	ΑT,	BE,	CH,
			CY,	DE,	DK,	ES,	FI,	FR,	GB,	GR,	ΙE,	IT,	LU,	MC,	NL,	PT,	SE,	TR,
			BF,	ВJ,	CF,	CG,	CI,	CM,	GΑ,	GN,	GQ,	GW,	ML,	MR,	ΝE,	SN,	TD,	TG
	EP 1334229						0813	EP 2001-986139					20	0011	114			
		R:	ΑT,	BE,	CH,	DE,	DK,	ES,	FR,	GB,	GR,	IT,	LI,	LU,	NL,	SE,	MC,	PT,
			ΙE,	SI,	LT,	LV,	FI,	RO,	MK,	CY,	AL,	TR						
	JР	2004	5219	93		T2		2004	0722		JP 2	003-	5087	68		20	0011	114
PRAI	US	2000	-2492	234P		P		2000	1116									
	WO	2001	-US4	7690		W		2001	1114									
	**	3 1-			. 1. 7 .	- 7 1-	-					-	,	_	_			

AB Hydrophilic curable alkoxylated silicone polymers (for surface modification) are useful in, e.g., fiber and fabric care, hair care, skin care, surface care, and car care compns. The compds. are curable silicone polymers which contain ≥1 polyalkyleneoxy groups, preferably polyalkyleneoxy pendant groups, comprising at least some ethyleneoxy units, the polyalkyleneoxy pendant groups are preferably capped with low mol. weight alkyl groups, such as C1-6-alkyl. These compds. are substantive to the surface but keep the surface hydrophilic. A

```
polyethylene glycol allyl Me ether intermediate was reacted with Me
     terminated methylhydrosiloxane-dimethylsiloxane
     copolymer in the presence of Pt catalyst, subsequently
     N-allylethylenediamine and vinylmethyldimethoxysilane to give curable
     silicone with amine, Me ethoxylate, and SiOMe functionality.
     ICM C08J003-00
TC
INCL 524588000
     37-3 (Plastics Manufacture and Processing)
CC
ST
     polyoxyalkylene polysiloxane manuf
ΙT
     Fabric finishing
        (agents; hydrophilic curable ethoxylated silicones for)
TΤ
     Polysiloxanes, preparation
     RL: IMF (Industrial manufacture); TEM (Technical or engineered material
     use); PREP (Preparation); USES (Uses)
        (polyoxyalkylene-; hydrophilic curable ethoxylated silicones
        and intermediate functional ethoxylates)
TТ
     Polyoxyalkylenes, preparation
     RL: IMF (Industrial manufacture); TEM (Technical or engineered material
     use); PREP (Preparation); USES (Uses)
        (polysiloxane-; hydrophilic curable ethoxylated
        silicones and intermediate functional ethoxylates)
IT
     Hair preparations
        (sprays; hydrophilic curable ethoxylated silicones for)
тт
     107-05-1DP, Allyl chloride, reaction products with imidazole, functional
     ethoxylates, and reactive siloxanes 288-32-4DP,
     Imidazole, reaction products with allyl chloride, functional ethoxylates,
     and reactive siloxanes
                              556-67-2DP,
     Octamethylcyclotetrasiloxane, reaction products with functional
     ethoxylates and reactive siloxanes
                                         919-30-2DP,
     Aminopropyltriethoxysilane, reaction products with reactive
     siloxanes and functional ethoxylates
                                            2155-94-4DP,
     Dimethylallylamine, reaction products with functional ethoxylates and
     reactive siloxanes
                         2944-70-9DP, reaction products with
     functional ethoxylates and reactive siloxanes
                                                     16753-62-1DP,
     Vinylmethyldimethoxysilane, reaction products with functional ethoxylates
     and reactive siloxanes
                              26403-72-5DP, Polyethylene glycol
     diglycidyl ether, reaction products with reactive siloxanes,
     acetate salt 31692-79-2DP, Hydroxy-terminated
     polydimethylsiloxane, reaction products with functional
     ethoxylates 156118-35-3DP, Dimethylsilanediol-methylsilanediol
     copolymer, Me-terminated, reaction products with functional ethoxylates
     192518-56-2DP, reaction products with functional ethoxylates and
     reactive siloxanes
     RL: IMF (Industrial manufacture); PREP (Preparation)
        (component of fabric care and personal care agents; hydrophilic curable
        ethoxylated silicones and intermediate functional
        ethoxylates)
IT
     9041-33-2P, Ethylene oxide-propylene oxide copolymer monoallyl ether
     27252-80-8P, Polyethylene glycol allyl methyl ether
                                                           27274-31-3P,
     Polyethylene glycol monoallyl ether 52002-43-4P 97969-60-3P
     147962-80-9P 189240-06-0P 362060-08-0P
                                              449754-21-6P
     449754-22-7P
                   449754-23-8P
                                   449754-24-9P
                                                  449754-25-0P
     449754-26-1P
     RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT
     (Reactant or reagent)
        (intermediate for adduction with reactive siloxanes;
       hydrophilic curable ethoxylated silicones and intermediate
        functional ethoxylates)
IT
     115254-29-0DP, Dimethylsilyl-terminated
```

polydimethylsiloxane, reaction products with allyl chloride and

imidazole

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(intermediate; hydrophilic curable ethoxylated silicones and intermediate functional ethoxylates)

IT 2370-88-9, 1,3,5,7-Tetramethylcyclotetrasiloxane

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction with allylethylenediamine; hydrophilic curable ethoxylated silicones and intermediate functional ethoxylates)

IT 40510-22-3

RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with tetramethylcyclotetrasiloxane; hydrophilic
curable ethoxylated silicones and intermediate functional
ethoxylates)

IT 288-32-4DP, Imidazole, reaction products with allyl chloride,
 functional ethoxylates, and reactive siloxanes
 31692-79-2DP, Hydroxy-terminated polydimethylsiloxane,
 reaction products with functional ethoxylates 156118-35-3DP,
 Dimethylsilanediol-methylsilanediol copolymer, Me-terminated, reaction
 products with functional ethoxylates 192518-56-2DP, reaction
 products with functional ethoxylates and reactive siloxanes
 RL: IMF (Industrial manufacture); PREP (Preparation)
 (component of fabric care and personal care agents; hydrophilic curable
 ethoxylated silicones and intermediate functional
 ethoxylates)

RN 288-32-4 HCAPLUS CN 1H-Imidazole (9CI) (CA INDEX NAME)



RN 31692-79-2 HCAPLUS CN Poly[oxy(dimethylsilylene)], α -hydro- ω -hydroxy- (8CI, 9CI) (CA INDEX NAME)

$$\begin{array}{c|c} \text{Me} & \\ \text{H} & \\ \hline & \text{O-} \\ \text{Si} & \\ \text{Me} & \\ \end{array}$$

RN 156118-35-3 HCAPLUS
CN Silanediol, dimethyl-, polymer with methylsilanediol (9CI) (CA INDEX NAME)

CM 1

CRN 43641-90-3 CMF C H6 O2 Si

CM 2

CRN 1066-42-8 CMF C2 H8 O2 Si

192518-56-2 HCAPLUS RN

CNPoly[oxy(dimethylsilylene)], α -(methoxydimethylsilyl)- ω -[(methoxydimethylsilyl)oxy] - (9CI) (CA INDEX NAME)

97969-60-3P 189240-06-0P 362060-08-0P IT

449754-26-1P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(intermediate for adduction with reactive siloxanes;

hydrophilic curable ethoxylated silicones and intermediate

functional ethoxylates)

RN 97969-60-3 HCAPLUS

Poly(oxy-1,2-ethanediyl), α -methyl- ω -[3-CN (triethoxysily1)propoxy] - (9CI) (CA INDEX NAME)

EtO-
$$Si-(CH_2)_3-O$$
- CH_2-CH_2-O _n Me

RN189240-06-0 HCAPLUS

CN1H-Imidazole, 1-[3-(dichloromethylsilyl)propyl]-, monohydrochloride, homopolymer, hydrolytic (9CI) (CA INDEX NAME)

CM 1

CRN 189239-73-4

CMF C7 H12 Cl2 N2 Si . Cl H

$$(CH_2)_3 - Si - Me$$

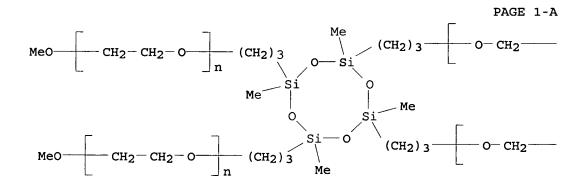
● HCl

CM 2

CRN 7732-18-5 CMF H2 O

H₂O

RN 362060-08-0 HCAPLUS CN Poly(oxy-1,2-ethanediyl), $\alpha,\alpha',\alpha'',\alpha'''$ -[(2,4,6,8-tetramethylcyclotetrasiloxane-2,4,6,8-tetrayl)tetra-3,1-propanediyl]tetrakis[ω -methoxy- (9CI) (CA INDEX NAME)



PAGE 1-B

$$-CH_2$$
 OMe

RN 449754-26-1 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α,α',α'',α''',α'''
',α'''',α''''-[(2,4,6,8tetramethylcyclotetrasiloxane-2,4,6,8-tetrayl)tetrakis(3,1propanediylnitrilodi-2,1-ethanediyl)]octakis[ω-methoxy-(9CI) (CA
INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 115254-29-0DP, Dimethylsilyl-terminated
 polydimethylsiloxane, reaction products with allyl chloride and
 imidazole

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(intermediate; hydrophilic curable ethoxylated silicones and intermediate functional ethoxylates)

RN 115254-29-0 HCAPLUS

CN Poly[oxy(dimethylsilylene)], α -(dimethylsilyl)- ω [(dimethylsilyl)oxy]- (9CI) (CA INDEX NAME)

L36 ANSWER 9 OF 12 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1999:726608 HCAPLUS

DN 132:64592

TI Synthesis and Photoimaging Study of a New Poly(methacrylate) with Tethered Silacyclobutane Moiety

AU Wu, Xiaosong; Grinevich, Oleg; Neckers, Douglas C.

CS Center for Photochemical Sciences, Bowling Green State University, Bowling Green, OH, 43403, USA

SO Chemistry of Materials (1999), 11(12), 3687-3692 CODEN: CMATEX; ISSN: 0897-4756

PB American Chemical Society

DT Journal

LA English

by

AB A methacrylate with a tethered silacyclobutane moiety,
6-(methylcyclotrimethylenesilyl)hexyl methacrylate, was synthesized.
Radical polymerization (thermal) yielded a linear poly(methacrylate) without affecting the silicon-containing four-membered ring. Photoactivated ring-opening polymerization of the silacyclobutane functionality was employed to

crosslink the polymer thin film, yielding, after development, a neg. photoimage. Evidence of solid-state ring-opening polymerization was provided

IR spectroscopy. Postbaking was important. With 0.1% molar Pt(acac)2 with respect to monomer, the system exhibited Dc [min. exposure dose] of 900 mJ/cm2.

CC 35-7 (Chemistry of Synthetic High Polymers)
 Section cross-reference(s): 36, 74

ST methacrylate silacyclobutane prepn ring opening polymn photoimage; photoimage polysilane methacrylate platinum catalyzed ring opening polymn

IT Negative photoresists
Photoimaging

(neg. photoresist based on ring opening and post-backing of

methacrylate-tethered poly(silacyclobutane) for photoimaging) Polycarbosilanes ΙT RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (neg. photoresist based on ring opening and post-backing of methacrylate-tethered poly(silacyclobutane) for photoimaging) ΙT Crosslinking (photochem., ring-opening; neg. photoresist based on ring opening and post-backing of methacrylate-tethered poly(silacyclobutane) for photoimaging) Polymerization IT (radical; neg. photoresist based on ring opening and post-backing of methacrylate-tethered poly(silacyclobutane) for photoimaging) IT Polymerization (ring-opening; neg. photoresist based on ring opening and post-backing of methacrylate-tethered poly(silacyclobutane) for photoimaging) IT 15170-57-7, Bis (acetylacetonato) platinum RL: CAT (Catalyst use); USES (Uses) (ROMP - photocrosslinking catalyst; neg. photoresist based on ring opening and post-backing of methacrylate-tethered poly(silacyclobutane) for photoimaging) IT 71-43-2, Benzene, uses RL: NUU (Other use, unclassified); USES (Uses) (image developer; neg. photoresist based on ring opening and post-backing of methacrylate-tethered poly(silacyclobutane) for photoimaging) IT 106-93-4, 1,2-Dibromoethane RL: CAT (Catalyst use); USES (Uses) (initiator; neg. photoresist based on ring opening and post-backing of methacrylate-tethered poly(silacyclobutane) for photoimaging) IT 59431-24-2P, 6-Chlorohexyl tert-Butyldimethylsilyl Ether 180424-57-1P, 6-(Methylcyclotrimethylenesilyl)-1-hexanol 253304-28-8P, 6-(Methylcyclotrimethylenesilyl)hexyl tert-Butyldimethylsilyl Ether RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (intermediate; neg. photoresist based on ring opening and post-backing of methacrylate-tethered poly(silacyclobutane) for photoimaging) 253304-30-2P, 6-(Methylcyclotrimethylenesilyl)hexyl methacrylate IT RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (monomer; neg. photoresist based on ring opening and post-backing of methacrylate-tethered poly(silacyclobutane) for photoimaging) IT 2009-83-8, 6-Chloro-1-hexanol RL: NUU (Other use, unclassified); USES (Uses) (neg. photoresist based on ring opening and post-backing of methacrylate-tethered poly(silacyclobutane) for photoimaging) IT 25722-25-2DP, 1,1,3,3-Tetramethyl-1,3-disilacyclobutane homopolymer, SRU, methacrylate-tethered 30029-85-7DP, 1,1,3,3-Tetramethyl-1,3disilacyclobutane homopolymer, methacrylate-tethered RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (neg. photoresist based on ring opening and post-backing of methacrylate-tethered poly(silacyclobutane) for photoimaging) 920-46-7, Methacryloyl chloride IT 2351-34-0 18162-48-6, tert-Butyldimethylsilyl chloride RL: RCT (Reactant); RACT (Reactant or reagent) (neg. photoresist based on ring opening and post-backing of methacrylate-tethered poly(silacyclobutane) for photoimaging) ΙT 253304-31-3DP, 6-(Methylcyclotrimethylenesilyl)hexyl methacrylate polymer, photocrosslinking ring-opening products 253304-31-3P,

CN 2-Propenoic acid, 2-methyl-, 6-(1-methylsilacyclobut-1-yl)hexyl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 253304-30-2 CMF C14 H26 O2 Si

RN 253304-31-3 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 6-(1-methylsilacyclobut-1-yl)hexyl ester,
homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 253304-30-2 CMF C14 H26 O2 Si

IT 288-32-4, Imidazole, uses

RL: NUU (Other use, unclassified); USES (Uses) (reaction medium; neg. photoresist based on ring opening and post-backing of methacrylate-tethered poly(silacyclobutane) for photoimaging)

RN288-32-4 HCAPLUS

CN 1H-Imidazole (9CI) (CA INDEX NAME)



THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD RE.CNT 29 ALL CITATIONS AVAILABLE IN THE RE FORMAT

ANSWER 10 OF 12 HCAPLUS COPYRIGHT 2006 ACS on STN L36

1997:44527 HCAPLUS AN

DN 126:75330

Bisalkenyl-substituted nadimides, their manufacture, and their TI thermosetting compositions

IN Futaesaku, Norio; Washimori, Akiko; Kudo, Masaaki; Fukuda, Hideo; Maruyama, Isao

PA Maruzen Oil Co Ltd, Japan

Jpn. Kokai Tokkyo Koho, 23 pp. so

CODEN: JKXXAF

DТ Patent

Japanese LA

FAN.CNT 1

KIND PATENT NO. DATE APPLICATION NO. DATE ------------------------PΤ JP 08277265 A2 19961022 JP 1995-104880 19950404 PRAI JP 1995-104880 19950404 OS MARPAT 126:75330

GI

II

AB Bisalkenyl-substituted nadimide I is synthesized by the reaction of nadic anhydride derivative II with diamine III (R1, R2 = H, Me; R3 = H, halogen, Me; R4, R5 = C1-4 alkylene; p, r = 0-3; q = 0, 1). Thermosetting compns. with good dielec. property, water absorbance, and transparency are made from nadimide I and other components selected from maleimide compds., alkenyl-substituted nadimide compds., epoxy resins, phenolic resins, vinylbenzyl compds., vinyl compds., cyclic olefins, functional group-containing conjugated dienes, and unsatd. polyester resins. The thermosetting resins may also contain silicone resins, modified silicone resins, polysulfone resins, polyphenylene sulfides, and fluoropolymers.

 $H_2N-A-NH_2$

III

IC ICM C07D209-76

R1

ICS C08F022-40; C08F026-06; C08K005-3417; C08L101-00

CC 35-2 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 27, 37, 42

ST nadimide thermosetting resin manuf

IT Polysiloxanes, uses

RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(Me Ph, coating composition; bisalkenyl-substituted nadimides, their manufacture, and their thermosetting compns.)

IT Fluoropolymers, uses

Polysulfones, uses

RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(coating composition; bisalkenyl-substituted nadimides, their manufacture, and their thermosetting compns.)

IT Polysiloxanes, uses

Polysiloxanes, uses

RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or

```
engineered material use); USES (Uses)
        (epoxy, coating composition; bisalkenyl-substituted nadimides,
        their manufacture, and their thermosetting compns.)
IT
     Butadiene rubber, preparation
     RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or
     engineered material use); PREP (Preparation); USES (Uses)
        (epoxy-terminated, polymers with bisalkenyl-substituted
        nadimides; bisalkenyl-substituted nadimides, their manufacture,
        and their thermosetting compns.)
     Polysiloxanes, uses
ΤT
       Polysiloxanes, uses
     RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or
     engineered material use); USES (Uses)
        (polyester-; bisalkenyl-substituted nadimides, their manufacture,
        and their thermosetting compns.)
IT
     Epoxy resins, uses
     Epoxy resins, uses
     RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or
     engineered material use); USES (Uses)
        (polysiloxane-, coating composition; bisalkenyl
        -substituted nadimides, their manufacture, and their thermosetting compns.)
TΤ
    Polyesters, uses
     Polyesters, uses
     RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or
     engineered material use); USES (Uses)
        (polysiloxane-; bisalkenyl-substituted nadimides,
        their manufacture, and their thermosetting compns.)
TT
    Plastics, preparation
    RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or
     engineered material use); PREP (Preparation); USES (Uses)
        (thermosetting, transparent; bisalkenyl-substituted
       nadimides, their manufacture, and their thermosetting compns.)
              77-78-1, Dimethyl sulfate
                                           80-15-9, Cumene hydroperoxide
     80-43-3, Dicumyl peroxide
                                88-61-9
                                         104-15-4, p-Toluenesulfonic acid,
           119-53-9, Benzoin 121-69-7, N,N-Dimethylaniline, uses
     288-32-4, Imidazole, uses 313-39-3, Diphenyliodonium
    tetrafluoroborate
                        592-39-2
                                   670-96-2, 2-Phenylimidazole
                                                                  693-98-1,
                        1931-62-0, tert-Butylperoxy maleate
     2-Methylimidazole
                                                             13476-99-8
     14024-18-1, Iron acetylacetonate
                                        14284-89-0, Manganese acetylacetonate
     15653-01-7, Cerium acetylacetonate
                                        18715-41-8, Pyridine sulfate (2:1)
     24057-28-1, Pyridine, p-toluenesulfonate
                                                33943-20-3, Di-tert-butylperoxy
     isophthalate
                   58109-40-3, Diphenyliodonium hexafluorophosphate
     75007-13-5, Diphenyliodonium perchlorate
    RL: CAT (Catalyst use); USES (Uses)
        (bisalkenyl-substituted nadimides, their manufacture, and their
       thermosetting compns.)
                   185139-74-6P
IT
    185139-73-5P
    RL: IMF (Industrial manufacture); PRP (Properties); RCT (Reactant); TEM
     (Technical or engineered material use); PREP (Preparation); RACT (Reactant
    or reagent); USES (Uses)
        (bisalkenyl-substituted nadimides, their manufacture, and their
       thermosetting compns.)
IT
    185139-73-5DP, polymers with epoxy-modified polybutadiene rubber
            185139-76-8P
                          185139-77-9P
                                          185139-78-0P
                                                         185139-79-1P
    185139-81-5P
                   185139-83-7P
                                  185139-85-9P
                                                185139-86-0P
                                                                 185139-88-2P
    185230-81-3P
                   185230-82-4P
    RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or
    engineered material use); PREP (Preparation); USES (Uses)
        (bisalkenyl-substituted nadimides, their manufacture, and their
       thermosetting compns.)
```

PENG 10/722406 09/07/2006 Page 33

IT 2916-26-9, 2,5-Bis(aminomethyl)-bicyclo[2.2.1]heptane 134379-62-7
142280-46-4

RL: RCT (Reactant); RACT (Reactant or reagent)
(bisalkenyl-substituted nadimides, their manufacture, and their thermosetting compns.)

IT 9003-17-2P

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(butadiene rubber, epoxy-terminated, polymers with bisalkenyl-substituted nadimides; bisalkenyl-substituted nadimides, their manufacture, and their thermosetting compns.)

IT 9002-84-0, PTFE

RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(coating composition; bisalkenyl-substituted nadimides, their manufacture, and their thermosetting compns.)

IT 288-32-4, Imidazole, uses

RL: CAT (Catalyst use); USES (Uses)
 (bisalkenyl-substituted nadimides, their manufacture, and their
 thermosetting compns.)

RN 288-32-4 HCAPLUS

CN 1H-Imidazole (9CI) (CA INDEX NAME)



L36 ANSWER 11 OF 1/2 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1995:283229 HCAPLUS

DN 122:57481

TI Heat-curable **siloxane** compositions, preformed latent **platinum catalysts**, and methods for making

IN Sumpter, Chris A.; Lewis, Larry N.; Lawrence, William B.

PA General Electric Co., USA

SO U.S., 10 pp. Cont.-in-part of U.S. Ser. No. 800,311, abandoned. CODEN: USXXAM

DT Patent

LA English

FAN.CNT 2

L'ETA.	CNI Z				
	PATENT NO.		DATE	APPLICATION NO.	DATE
		- - - -			
ΡI	US 5331075	Α	19940719	US 1992-955987	19921013
	CA 2080153	AA	19930530	CA 1992-2080153	19921008
	JP 05295269	A2	19931109	JP 1992-309859	19921119
	EP 545591	A1	19930609	EP 1992-310612	19921120
	EP 545591	B1	19970205		
	R: BE, DE, FR,	GB, IT	•		
	US 5432140	A	19950711	US 1993-154420	19931119
PRAI	US 1991-800311	B2	19911129		
	US 1992-955987	A	19921013		
3.50	5 1				

AB A heat-curable siloxane composition which resists substantial increase in viscosity for at least a five day accelerated aging period at 50° comprises (A) vinyl organopolysiloxane fluid (B) silicon hydride siloxane, and (C) an amount of a preformed latent platinum catalyst which is effective for catalyzing addition between (A) and (B), where the preformed latent platinum

catalyst is made by effecting reaction in the substantial absence of (A) or (B) or mixture thereof, between a zero valent platinum catalyst complex and 1.0 to 60 mol of an organic nitrogen compound per mol of Pt. The organic nitrogen compound is selected from 2,2'-bipyridine, diazodicarboxylate, diisopropylazodicarboxylate, 4-phenyl-1,2,4-triazoline-3,5-dione, azobistoluoyl, azobisbenzoyl, azobis(N,N'-dimethylformamide), 4-methyl-1,2,4-triazoline-3,5-dione, 1,10-phenanthroline, di-t-Bu azodicarboxylate, neocuproine, dibenzyl azodicarboxylate, phthalazine, quinazoline, quinoxaline, 4,4'-dipyridyl, 3,3'-dipyridyl, 2,4'-dipyridyl, benzimidazole, indazole, dipyridyl ketone, 2,2':6',2-terpyridine and 4,4'-trimethylene dipyridine.

ICM C08G077-08 IC

INCL 528015000

CC 37-6 (Plastics Manufacture and Processing)

ST zerovalent platinum complex crosslinking catalyst; nitrogen compd platinum complex catalyst

IT Crosslinking catalysts

> (heat-curable siloxane compns. containing preformed latent platinum catalysts)

ΙT Siloxanes and Silicones, uses

RL: POF (Polymer in formulation); USES (Uses)

(hydrogen, heat-curable siloxane compns. containing preformed latent platinum catalysts)

IT Siloxanes and Silicones, uses

RL: POF (Polymer in formulation); USES (Uses)

(vinyl group-containing, heat-curable siloxane compns. containing preformed latent platinum catalysts)

TТ 51-17-2D, Benzimidazole, reaction products with zero-valent platinum complexes 66-71-7D, 1,10-Phenanthroline, reaction products with zero-valent platinum complexes 91-19-0D, Quinoxaline, reaction products with zero-valent platinum complexes 253-52-1D, Phthalazine, reaction products with zero-valent platinum complexes 253-82-7D, Quinazoline, reaction products with zero-valent platinum complexes 271-44-3D, Indazole, reaction products with zero-valent platinum complexes 366-18-7D, 2,2'-Bipyridine, reaction products with zero-valent platinum complexes 484-11-7D, Neocuproine, reaction products with zero-valent 553-26-4D, 4,4'-Dipyridyl, reaction products with platinum complexes zero-valent platinum complexes 581-46-4D, 3,3'-Dipyridyl, reaction products with zero-valent platinum complexes 581-47-5D, 2,4'-Dipyridyl, reaction products with zero-valent platinum complexes 870-50-8D, Di-tert-butyl azodicarboxylate, reaction products with zero-valent platinum complexes 959-31-9D, reaction products with zero-valent platinum complexes 1148-79-4D, 2,2':6',2-Terpyridine, reaction products with zero-valent platinum complexes 1972-28-7D, reaction products with zero-valent platinum complexes 2446-83-5D, Diisopropylazodicarboxylate, reaction products with zero-valent platinum complexes 2449-05-0D, Dibenzyl azodicarboxylate, reaction products with zero-valent platinum 2627-95-4D, reaction products with chloroplatinic acid and complexes organic nitrogen compds. 4233-33-4D, 4-Phenyl-1,2,4-triazoline-3,5-dione, reaction products with zero-valent platinum complexes 10465-78-8D, reaction products with zero-valent platinum complexes 13274-43-6D, 4-Methyl-1,2,4-triazoline-3,5-dione, reaction products with zero-valent platinum complexes 16941-12-1D, Chloroplatinic acid, reaction products with sym-tetramethyldivinyldisiloxane and organic nitrogen compds. 17252-51-6D, 4,4'-Trimethylene dipyridine, reaction products with zero-valent platinum complexes 53612-39-8D, reaction products with zero-valent platinum complexes 144817-18-5D, Azobistoluoyl, reaction products with zero-valent platinum complexes RL: CAT (Catalyst use); USES (Uses)

(heat-curable siloxane compns. containing preformed latent

PENG 10/722406 09/07/2006 Page 35

platinum catalysts)

IT 31900-57-9D, Dimethylsilanediol homopolymer, vinyl-terminated
59942-04-0

RL: POF (Polymer in formulation); USES (Uses) (heat-curable siloxane compns. containing preformed latent

platinum catalysts)
271-44-3D, Indazole, reaction products with zero-valent platinum

IT 271-44-3D, Indazole, reaction products with zero-valer complexes

RL: CAT (Catalyst use); USES (Uses)

(heat-curable siloxane compns. containing preformed latent platinum catalysts)

RN 271-44-3 HCAPLUS

CN 1H-Indazole (7CI, 8CI, 9CI) (CA INDEX NAME)

IT 31900-57-9D, Dimethylsilanediol homopolymer, vinyl-terminated
59942-04-0

RL: POF (Polymer in formulation); USES (Uses)

(heat-curable **siloxane** compns. containing preformed latent **platinum** catalysts)

RN 31900-57-9 HCAPLUS

CN Silanediol, dimethyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 1066-42-8 CMF C2 H8 O2 Si

RN 59942-04-0 HCAPLUS

CN Poly[oxy(dimethylsilylene)], α -(ethenyldimethylsilyl)- ω [(ethenyldimethylsilyl)oxy]- (9CI) (CA INDEX NAME)

L36 ANSWER 12 OF 12 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1983:180051 HCAPLUS

DN 98:180051

TI Platinum-, rhodium-, and iridium-nitrogen complex

IT

92-82-0

RL: RCT (Reactant); RACT (Reactant or reagent) (reaction of, with potassium platinum chloroethylene)

IT **288-32-4**, reactions 288-88-0

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction of, with potassium platinum trichloroethylene)

IT 288-32-4, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction of, with potassium platinum trichloroethylene)

RN 288-32-4 HCAPLUS

CN 1H-Imidazole (9CI) (CA INDEX NAME)



=>